```
accessing the remaining file names entered.
ENTER A FILE NAME OR (IGNORE):ignore
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     0.22       0.22

FILE 'AGRICOLA' ENTERED AT 13:50:06 ON 09 APR 2009

FILE 'BIOTECHNO' ENTERED AT 13:50:06 ON 09 APR 2009
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FILE 'LIFESCI' ENTERED AT 13:50:06 ON 09 APR 2009
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FILE 'PASCAL' ENTERED AT 13:50:06 ON 09 APR 2009
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=> anti-neu5Gc antibody
L1            2 FILE AGRICOLA
L2            0 FILE BIOTECHNO
L3            2 FILE CONFSCI
L4            0 FILE HEALSAFE
L5            3 FILE LIFESCI
L6            0 FILE PASCAL

TOTAL FOR ALL FILES
L7            7 ANTI-NEU5GC ANTIBODY

=> dup rem
ENTER L# LIST OR (END):l7
PROCESSING COMPLETED FOR L7
L8            6 DUP REM L7 (1 DUPLICATE REMOVED)

=> d l8 ibib abs total

L8   ANSWER 1 OF 6  AGRICOLA  Compiled and distributed by the National
     Agricultural Library of the Department of Agriculture of the United States
     of America.  It contains copyrighted materials.  All rights reserved.
     (2009) on STN
ACCESSION NUMBER:         2009:2545  AGRICOLA
DOCUMENT NUMBER:          IND44134196
TITLE:                    Evidence for a human-specific mechanism for diet and
                          antibody-mediated inflammation in carcinoma
                          progression.
AUTHOR(S):                Hedlund, Maria; Padler-Karavani, Vered; Varki, Nissi
                          M.; Varki, Ajit
SOURCE:                   Proceedings of the National Academy of Sciences of the
                          United States of America, 2008 Dec. 2 Vol. 105, no. 48
                          p. 18936-18941
                          Publisher: National Academy of Sciences
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ISSN: 0027-8424
NOTE: Includes references
DOCUMENT TYPE: Article
FILE SEGMENT: Other US
LANGUAGE: English
AB Patients with cancer have circulating heterophile antibodies that agglutinate animal red cells via recognition of the mammalian cell surface sialic acid N-glycolylneuraminic acid (Neu5Gc), which was long considered an oncofetal antigen in humans. However, humans are genetically deficient in Neu5Gc production and instead metabolically accumulate Neu5Gc from dietary sources, particularly red meats and milk products. Moreover, mice with a human-like defect showed no alternate pathway for Neu5Gc synthesis and even normal humans express anti-Neu5Gc antibodies. We show here that human tumors accumulate Neu5Gc that is covalently attached to multiple classes of glycans. The paradox of human tumor Neu5Gc accumulation in the face of circulating anti-Neu5Gc antibodies was hypothesized to be due to facilitation of tumor progression by the resulting low-grade chronic inflammation. Indeed, murine tumors expressing human-like levels of Neu5Gc show accelerated growth in syngeneic mice with a human-like Neu5Gc deficiency, coincident with the induction of anti-Neu5Gc antibodies and increased infiltration of inflammatory cells. Transfer of polyclonal monospecific syngeneic mouse anti-Neu5Gc serum also enhanced growth of transplanted syngeneic tumors bearing human-like levels of Neu5Gc, with tumors showing evidence for antibody deposition, enhanced angiogenesis and chronic inflammation. These effects were suppressed by a cyclooxygenase-2 inhibitor, a drug type known to reduce human carcinoma risk. Finally, affinity-purified human anti-Neu5Gc antibodies also accelerate growth of Neu5Gc-containing tumors in Neu5Gc-deficient mice. Taken together, the data suggest that the human propensity to develop diet-related carcinomas is contributed to by local chronic inflammation, resulting from interaction of metabolically-accumulated dietary Neu5Gc with circulating anti-Neu5Gc antibodies.

L8 ANSWER 2 OF 6 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2009) on STN DUPLICATE 1
ACCESSION NUMBER: 2008:127164 AGRICOLA
DOCUMENT NUMBER: IND44106990
TITLE: Diversity in specificity, abundance, and composition of anti-Neu5Gc antibodies in normal humans: Potential implications for disease.
AUTHOR(S): Padler-Karavani, Vered; Yu, Hai; Cao, Hongzhi; Chokhawala, Harshal; Karp, Felix; Varki, Nissi; Chen, Xi; Varki, Ajit
SOURCE: Glycobiology, 2008 Oct. Vol. 18, no. 10 p. 818-830
ISSN: 0959-6658
NOTE: Includes references
DOCUMENT TYPE: Article
FILE SEGMENT: Non-US
LANGUAGE: English
AB Human heterophile antibodies that agglutinate animal erythrocytes are known to detect the nonhuman sialic acid N-glycolylneuraminic acid (Neu5Gc). This monosaccharide cannot by itself fill the binding site (paratope) of an antibody and can also be modified and presented in various linkages, on diverse underlying glycans. Thus, we hypothesized that the human anti-Neu5Gc antibody response is diverse and polyclonal. Here, we use a novel set of natural and chemoenzymatically synthesized glycans to show that normal humans have an

abundant and diverse spectrum of such anti-Neu5Gc antibodies, directed against a variety of Neu5Gc-containing epitopes. High sensitivity and specificity assays were achieved by using N-acetylneuraminic acid (Neu5Ac)-containing probes (differing from Neu5Gc by one less oxygen atom) as optimal background controls. The commonest anti-Neu5Gc antibodies are of the IgG class. Moreover, the range of reactivity and Ig classes of antibodies vary greatly amongst normal humans, with some individuals having remarkably large amounts, even surpassing levels of some well-known natural blood group and xenoreactive antibodies. We purified these anti-Neu5Gc antibodies from individual human sera using a newly developed affinity method and showed that they bind to wild-type but not Neu5Gc-deficient mouse tissues. Moreover, they bind back to human carcinomas that have accumulated Neu5Gc in vivo. As dietary Neu5Gc is primarily found in red meat and milk products, we suggest that this ongoing antigen-antibody reaction may generate chronic inflammation, possibly contributing to the high frequency of diet-related carcinomas and other diseases in humans.

L8 ANSWER 3 OF 6 LIFESCI COPYRIGHT 2009 CSA on STN
ACCESSION NUMBER: 2008:180807 LIFESCI
TITLE: Immunological properties of human embryonic stem cell-derived oligodendrocyte progenitor cells
AUTHOR: Okamura, R.M.; Lebkowski, J.; Au, M.; Priest, C.A.; Denham, J.; Majumdar, A.S.
CORPORATE SOURCE: Menlo Park, California, USA; E-mail: rokamuraeron.com
SOURCE: Journal of Neuroimmunology [J. Neuroimmunol.], (20071200) vol. 192, no. 1-2, pp. 134-144. ISSN: 0165-5728.
DOCUMENT TYPE: Journal
FILE SEGMENT: F; N3
LANGUAGE: English
SUMMARY LANGUAGE: English
AB A major concern in the use of allotransplantation of human embryonic stem cell (hESC)-based therapies is the possibility of allogeneic rejection by the host's immune system. In this report, we determined the immunological properties of hESC-derived oligodendrocyte progenitor cells (OPC) that have the potential for clinical application for the treatment of patients with spinal cord injury. In vitro immunological studies suggest that hESC-derived OPCs are poor targets for both the innate and the adaptive human immune effector cells as well as resistant to lysis by anti-Neu5Gc antibodies. These results indicate that hESC-derived OPCs retain some of the unique immunological properties of the parental cell line from which they were differentiated.

L8 ANSWER 4 OF 6 LIFESCI COPYRIGHT 2009 CSA on STN
ACCESSION NUMBER: 2005:106223 LIFESCI
TITLE: Human embryonic stem cells express an immunogenic nonhuman sialic acid
AUTHOR: Martin, M.J.; Muotri, A.; Gage, F.; Varki, A.
CORPORATE SOURCE: Glycobiology Research and Training Center and Department of Medicine, University of California, San Diego, 9500 Gilman Drive, Mailcode: 0687, San Diego, CA 92093-0687, USA; E-mail: varkiadmin@ucsd.edu
SOURCE: Nature Medicine [Nat. Med.], (20050200) vol. 11, no. 2, pp. 228-232. ISSN: 1078-8956.
DOCUMENT TYPE: Journal
FILE SEGMENT: F
LANGUAGE: English
SUMMARY LANGUAGE: English

AB Human embryonic stem cells (HESC) can potentially generate every body cell type, making them excellent candidates for cell- and tissue-replacement therapies. HESC are typically cultured with animal-derived 'serum replacements' on mouse feeder layers. Both of these are sources of the nonhuman sialic acid Neu5Gc, against which many humans have circulating antibodies. Both HESC and derived embryoid bodies metabolically incorporate substantial amounts of Neu5Gc under standard conditions. Exposure to human sera with antibodies specific for Neu5Gc resulted in binding of immunoglobulin and deposition of complement, which would lead to cell killing in vivo. Levels of Neu5Gc on HESC and embryoid bodies dropped after culture in heat-inactivated anti-Neu5Gc antibody-negative human serum, reducing binding of antibodies and complement from high-titer sera, while allowing maintenance of the undifferentiated state. Complete elimination of Neu5Gc would be likely to require using human serum with human feeder layers, ideally starting with fresh HESC that have never been exposed to animal products.

L8 ANSWER 5 OF 6 CONFSCI COPYRIGHT 2009 CSA on STN
ACCESSION NUMBER: 2008:65162 CONFSCI
DOCUMENT NUMBER: 08-123851
TITLE: Neu5Gc and Human Anti-Neu5Gc Antibodies in Inflammation-induced Carcinoma Progression
AUTHOR: Padler-Karavani, Vered; Hedlund, Maria; Yu, Hai; Cao, Hongzhi; Chokhawala, Harshal A.; Karp, Felix; Data, Anup; Chen, Xi; Varki, Nissi M.; Varki, Ajit P.
CORPORATE SOURCE: Univ. of California, San Diego, La Jolla, CA, University of California-Davis, Davis, CA
SOURCE: 000 0000: 2008 Annual Meeting of the American Association for Cancer Research (0000000). San Diego, California (USA). 12-16 Apr 2008. American Association for Cancer Research (AACR).
DOCUMENT TYPE: Conference
FILE SEGMENT: DCCP
LANGUAGE: UNAVAILABLE

L8 ANSWER 6 OF 6 CONFSCI COPYRIGHT 2009 CSA on STN
ACCESSION NUMBER: 2008:51067 CONFSCI
DOCUMENT NUMBER: 08-092505
TITLE: Neu5Gc and Human Anti-Neu5Gc Antibodies in Inflammation-induced Carcinoma Progression
AUTHOR: Padler-Karavani, Vered; Hedlund, Maria; Yu, Hai; Cao, Hongzhi; Chokhawala, Harshal A.; Karp, Felix; Data, Anup; Chen, Xi; Varki, Nissi M.; Varki, Ajit P.
CORPORATE SOURCE: Univ. of California, San Diego, La Jolla, CA, University of California-Davis, Davis, CA
SOURCE: 000 0000: 2008 Annual Meeting of the American Association for Cancer Research (0000000). San Diego, California (USA). 12-16 Apr 2008. American Association for Cancer Research (AACR).
DOCUMENT TYPE: Conference
FILE SEGMENT: DCCP
LANGUAGE: UNAVAILABLE

=> neu5Ac(3A)(antibody or IgG or IgA or IgM)
L9 0 FILE AGRICOLA
L10 1 FILE BIOTECHNO
L11 0 FILE CONFSCI
L12 0 FILE HEALSAFE

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L13           2 FILE LIFESCI
L14           2 FILE PASCAL

TOTAL FOR ALL FILES
L15           5 NEU5AC(3A)(ANTIBODY OR IGG OR IGA OR IGM)

=> dup rem
ENTER L# LIST OR (END):l15
PROCESSING COMPLETED FOR L15
L16           2 DUP REM L15 (3 DUPLICATES REMOVED)

=> d l16 ibib abs total

L16  ANSWER 1 OF 2  LIFESCI    COPYRIGHT 2009 CSA on STN DUPLICATE 1
ACCESSION NUMBER:   2005:58986  LIFESCI
TITLE:              Biofilm Formation by Neisseria gonorrhoeae
AUTHOR:             Greiner, L.L.; Edwards, J.L.; Shao, J.; Rabinak, C.; Entz,
                    D.; Apicella, M.A.
CORPORATE SOURCE:   Department of Microbiology, University of Iowa, Iowa City,
                    Iowa
SOURCE:             Infection and Immunity [Infect. Immun.], (20050400) vol.
                    73, no. 4, pp. 1964-1970.
                    ISSN: 0019-9567.
DOCUMENT TYPE:      Journal
FILE SEGMENT:       J
LANGUAGE:           English
SUMMARY LANGUAGE:   English
AB   Studies were performed in continuous-flow chambers to determine whether
     Neisseria gonorrhoeae could form a biofilm. Under these growth conditions,
     N. gonorrhoeae formed a biofilm with or without the addition of 10 mu M
     sodium nitrite to the perfusion medium. Microscopic analysis of a 4-day
     growth of N. gonorrhoeae strain 1291 revealed evidence of a biofilm with
     organisms embedded in matrix, which was interlaced with water channels. N.
     gonorrhoeae strains MS11 and FA1090 were found to also form biofilms under
     the same growth conditions. Cryofield emission scanning electron
     microscopy and transmission electron microscopy confirmed that organisms
     were embedded in a continuous matrix with membranous structures spanning
     the biofilm. These studies also demonstrated that N. gonorrhoeae has the
     capability to form a matrix in the presence and absence of
     CMP-N-acetylneuraminic acid (CMP-Neu5Ac). Studies with
     monoclonal antibody 6B4 and the lectins soy bean agglutinin and
     Maackia amurensis indicated that the predominate terminal sugars in the
     biofilm matrix formed a lactosamine when the biofilm was grown in the
     absence of CMP-Neu5Ac and sialyllactosamine in the presence of CMP-Neu5Ac.
     N. gonorrhoeae strain 1291 formed a biofilm on primary urethral epithelial
     cells and cervical cells in culture without loss of viability of the
     epithelial cell layer. Our studies demonstrated that N. gonorrhoeae can
     form biofilms in continuous-flow chambers and on living cells. Studies of
     these biofilms may have implications for understanding asymptomatic
     gonococcal infection.

L16   ANSWER 2 OF 2  BIOTECHNO  COPYRIGHT 2009 Elsevier Science B.V. on STN
      DUPLICATE
ACCESSION NUMBER:         2003:36818433   BIOTECHNO
TITLE:                    Effects of buffering conditions and culture pH on
                          production rates and glycosylation of clinical phase I
                          anti-melanoma mouse IgG3 monoclonal antibody R24
AUTHOR:                   Muthing J.; Kemminer S.E.; Conradt H.S.; Sagi D.;
                          Nimtz M.; Karst U.; Peter-Katalinic J.
CORPORATE SOURCE:         Dr. J. Muthing, Inst. for Med. Phys. and Biophysics,
                          Laboratory for Biomedical Analysis, University of
```

Munster, D-48149 Munster, Germany.
E-mail: jm@uni-muenster.de
SOURCE: Biotechnology and Bioengineering, (05 AUG 2003), 83/3 (321-334), 88 reference(s)
CODEN: BIBIAU ISSN: 0006-3592
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 2003:36818433 BIOTECHNO
AB R24, a mouse IgG3 monoclonal antibody (MAb) against ganglioside GD3 (Neu5Acα8Neu5Acα3Gal β4Glcβ1Cer), can block tumor growth as reported in a series of clinical trials in patients with metastatic melanoma. The IgG molecule basically contains an asparagine-linked biantennary complex type oligosaccharide on the C.sub.H2 domain of each heavy chain, which is necessary for its in vivo effector function. The purpose of this study was to investigate the biotechnological production and particularly the glycosylation of this clinically important MAb in CO.sub.2/HCO.sub.3.sup.- (pH 7.4, 7.2, and 6.9) and HEPES buffered serum-free medium. Growth, metabolism, and IgG production of hybridoma cells (ATCC HB-8445) were analyzed on a 2-L bioreactor scale using fed-batch mode. Specific growth rates (μ) and MAb production rates (q.sub.I.sub.g.sub.G) varied significantly with maximum product yields at pH 6.9 (q.sub.I.sub.g.sub.G = 42.9 μg 10.sup.-.sup.6 cells d.sup.-.sup.1, p = 0.30 d.sup.-.sup.1) and lowest yields in pH 7.4 adjusted batches (q.sub.I.sub.g.sub.G = 10.8 μg 10.sup.-.sup.6 cells d.sup.-.sup.1, μ = 0.40 d.sup.-.sup.1). N-glycans were structurally characterized by high pH anion exchange chromatography with pulsed amperometric detection (HPAEC-PAD), matrix-assisted laser desorption ionization time-of-flight (MALDI-TOF), and electrospray-ionization quadrupole time-of-flight (ESI-QTOF) mass spectrometry (MS). The highest relative amounts of agalacto and monogalacto biantennary complex type oligosaccharides were detected in the pH 7.2 (46% and 38%, respectively) and pH 6.9 (44% and 40%, respectively) cultivations and the uppermost quantities of digalacto (fully galactosylated) structures in the pH 7.4 (32%) and the HEPES (26%) buffered fermentation. In the experiments with HEPES buffering, antibodies with a molar Neu5Ac/Neu5Gc ratio of 3.067 were obtained. The fermentations at pH 7.2 and 6.9 resulted in almost equal molar Neu5Ac/Neu5Gc ratios of 1.008 and 0.985, respectively, while the alkaline shift caused a moderate overexpression of Neu5Ac deduced from the Neu5Ac/Neu5Gc quotient of 1.411. Different culture buffering gave rise to altered glycosylation pattern of the MAb R24. Consequently, a detailed molecular characterization of MAb glycosylation is generally recommended as a part of the development of MAbs for targeted in vivo immunotherapy to assure biochemical consistency of product lots and oligosaccharide-dependent biological activity. .COPYRGT. 2003 Wiley Periodicals, Inc.